

**REMARKS**

At the outset, Applicant respectfully requests that the finality of the instant Office Action mailed September 28, 2007 be withdrawn. The first Office Action was made final by the Examiner. However, the previous paper filed on July 12, 2007 by Applicant was a Request for Continued Examine (RCE), which was responsive to an Advisory Action mailed July 6, 2007. In the Advisory Action, the Examiner checked box number 3 indicating that the proposed amendments "will not be entered" because "They raise new issues that would require further consideration and/or search." M.P.E.P 706.07(b) is very clear that it is improper to issue a first office action final when material was "denied" entry because new issues were raised that require further consideration and/or search, as is the case here. Indeed, M.P.E.P. 706.07(b) states:

**However, it would not be proper to make final a first Office action in a continuing or substitute application where that application contains material which was presented in the earlier application after final rejection or closing of prosecution but was denied entry because (A) new issues were raised that required further consideration and/or search, or (B) the issue of new matter was raised.**

M.P.E.P. 706.07(b) (emphasis added). Because this first office action after an RCE was improperly made final, Applicant requests that the finality of the instant action be withdrawn.

In response to the Office Action mailed September 28, 2007, the Examiner rejected claims 1-6, 9-14, 16-30, 32-42, 45-50, and 52-60 under 35 U.S.C. §103(a) as unpatentable over U.S. Application Publication No. 2004/0243560 to Broder et al. (Broder) in view of Moffat et al., "Self-Indexing Inverted Files For Fast Text Retrieval," February 1994, 1994 Australian Database Conference and 1994 IEEE Conference on Data Engineering ("Moffat") and rejected claims 8, 15, 31, 44, and 51 under 35 U.S.C.

§103(a) as unpatentable over Broder in view of Moffat and further in view of U.S. Patent No. 5,838,950 to Young et al. (Young).

By this Amendment, Applicant amends claims 1, 15, 25, 37, and 51 to more clearly define the features of those claims. Applicant submits that the specification supports these amendments (see, e.g., FIG. 3 and corresponding description in the specification).

Claims 1-6, 8-42, and 44-60 are currently pending.

**Rejection under 35 U.S.C. §103(a)**

The Examiner rejected claims 1-6, 9-14, 16-30, 32-42, 45-50, and 52-60 under 35 U.S.C. §103(a) as unpatentable over Broder in view of Moffat. Applicant respectfully traverses this rejection.

Claim 1, as amended, defines a method for indexing documents in a collection of documents using skip entries, each document comprising one or more index terms. The method includes, among other things, "determining a first value x representative of a first location for inserting a first skip entry in an inverted index, such that x is determined as an integer corresponding to a quantity of documents including at least a majority of the index terms." Claim 1 also includes "determining a second value y, where y does not exceed x, the second value y determined as an integer and representative of a second location for inserting a second skip entry in the inverted index, wherein y does not equal x, such that the first and second skip entries are provided at different intervals."

On page 27 of the Office Action, the Examiner concedes that Broder fails to teach skip entries. To cure that gap in Broder, the Examiner relies on Moffat. The

Examiner alleges that Moffat discloses a "skip entry" at page 14, first and second paragraphs. However, even if Moffat teaches a skip entry, Moffat's skip entry would, at best, be consistent with conventional skip entries, which provide the skip intervals at fixed intervals rather than at different intervals. Indeed, Applicant acknowledges conventional fixed interval approaches at FIG. 1 of the instant application (specification at para. 0031). Because Moffat allegedly discloses fixed intervals, Moffat fails to disclose or suggest at least the following aspect of claim 1: "determining a second value y, where y does not exceed x, the second value y determined as an integer and representative of a second location for inserting a second skip entry in the inverted index, wherein y does not equal x, such that the first and second skip entries are provided at different intervals."

On page 28 of the Office Action, the Examiner acknowledges that Broder fails to teach a skip entry. The Examiner acknowledges that Broder teaches "each index term is associated with a basic iterator 1125 object (a 'stream object') capable of sequentially iterating over its posting list." At best however, the Broder and Moffat combination, provides, as alleged by the Examiner, iteration over fixed intervals rather than skip entries at "different intervals," as recited in claim 1. Accordingly, neither Broder nor Moffat, whether taken alone or in any reasonable combination, discloses or suggests at least the following feature of claim 1: "determining a second value y, where y does not exceed x, the second value y determined as an integer and representative of a second location for inserting a second skip entry in the inverted index, wherein y does not equal x, such that the first and second skip entries are provided at different intervals."

Therefore, the rejection under 35 U.S.C. §103(a) of claim 1 as well as claims 2-6 and 9-

14, at least by reason of their dependency from independent claim 1, should be withdrawn.

Claims 15, 25, 37, and 51, although of different scope, includes features that are similar to those noted above for claim 1. Claims 16-24 depend from independent claim 15. Claims 26-36 depend from claim 25. Claims 38-42 and 44-50 depend from independent claim 37. Claims 52-60 depend from claim 51. For at least the reasons given above with respect to claim 1, claims 16-30, 32-42, 45-50, and 52-60 are allowable over Broder and Moffat, whether taken along or in combination, and the rejection of those claims under 35 U.S.C. §103(a) should be withdrawn.

**Rejection under 35 U.S.C. §103(a)**

The Examiner rejected claims 8, 15, 31, 44, and 51 under 35 U.S.C. §103(a) as unpatentable over Broder in view of Moffat and Young. Applicant respectfully traverses this rejection.

Claim 8 depends from claim 1 and includes all the features therein including, among other things, "determining a second value y, where y does not exceed x, the second value y determined as an integer and representative of a second location for inserting a second skip entry in the inverted index, wherein y does not equal x, such that the first and second skip entries are provided at different intervals." As noted above with respect to claim 1, neither Broder nor Moffat discloses or suggests at least the noted feature. Although Young discloses an adapter integrated circuit, Young fails to cure the noted deficiencies of Broder and Moffat. Accordingly, neither Broder, Moffat, nor Young, whether taken along or in combination, discloses or suggests the noted feature, and thus the rejection of claim 8, under 35 U.S.C. §103(a) should be withdrawn.

Moreover, claim 8 further recites the following feature: "wherein x is selected from a first range of 256 to 512 and y is selected from a second range of 128 to 256, wherein y is not selected to have the same value as x." The Examiner acknowledges that neither Broder nor Moffat discloses the noted feature. Office Action, page 20. To cure that gap, the Examiner relies on Young at col. 140, lines 30-43 for an alleged disclosure for the ranges 256 to 512 and 128 to 256. Office Action, page 30.

Applicant submits that there is no disclosure at Young col. 140, lines 30-43 that has anything to do with skip entries at ranges 256-512 and 128 to 256, much less "wherein x is selected from a first range of 256 to 512 and y is selected from a second range of 128 to 256, wherein y is not selected to have the same value as x." Instead, Young at col. 140, lines 30-43 describes physical memory addresses.

Moreover, Applicant fails to see why a skilled artisan would be motivated to modify Broder and Moffat based on Young, a reference directed to operating a host adapter in an integrated circuit — a very different field of art. In short, the Examiner is using hindsight to cobble together three very disparate references, i.e., Broder, Moffat, and Young. In view of the foregoing, the rejection of claim 8 under 35 U.S.C. §103(a) should be withdrawn for this additional reason.

The Examiner's reference to *In re Aller* is inapposite. Office Action, page 30.

The M.P.E.P. 2144.05 states the following:

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature

between 40°C and 80°C and an acid concentration between 25% and 70% was held to be *prima facie* obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%); see also *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Hoeschle*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

As can be seen by the above, in *Aller* the claimed range and the prior art range dealt with temperature ranges. Unlike *Aller*, the ranges of claim 8 are related to skip indexes (e.g., at least by reason of their dependency to claim 1), while Young's ranges come from a reference dealing physical memory addresses (Young at col. 140, lines 30-43).

Moreover, the Examiner alleges that discovering optimum or workable ranges involves only routine skill in the art. Office Action, page 30. Applicant disagrees and submits that the placement of skip entries as specified by the ranges of claim 8 enable substantially all of the index terms (e.g., more than 90%) in "x" documents or fewer, which is clearly an aspect that is well beyond the level of ordinary skill.<sup>1</sup> Specification at para. 0034. Indeed, none of the cited references describes the benefit of this claimed

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<sup>1</sup> See, e.g., M.P.E.P. 2144.05 § III "Applicants can rebut a *prima facie* case of obviousness based on overlapping ranges by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)."

feature, much less identify the problem. If the Examiner is taking official notice regarding the ranges and the level of ordinary skill in the skip entry art, Applicant submits that the Examiner must submit an affidavit or other documentary evidence, as required by M.P.E.P. 2144.03 ("If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2)). Absent such support, the rejection of claim 8 under 35 U.S.C. §103(a) should be withdrawn for this additional reason.

Moreover, the Examiner's motivation to combine the cited references does not comply with the PTO's own "Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of the Supreme Court Decision in KSR," Federal Register, Vol. 72, No. 195, Wednesday, October 10, 2007. In particular, the Examiner has not made all of the showings as required by these guidelines. For this additional reason, the rejection of claim 8 under 35 U.S.C. §103(a) should be withdrawn for this additional reason.

Claims 15, 31, 44, and 51, although of different scope, include features similar to those noted above with respect to claim 8. For at least the reasons given above with respect to claim 8, the rejection under 35 U.S.C. § 103(a) of claims 15, 31, 44, and 51 should be withdrawn.

CONCLUSION

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner. Applicant submits that the proposed amendments do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Therefore, this Amendment should allow for immediate action by the Examiner. Finally, Applicant submits that the entry of the amendment would place the application in better form for appeal, should the Examiner continue to dispute the patentability of the pending claims.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below. No fee is believed to be due, however, the Commissioner is hereby authorized to charge any fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Reference No. 34874-165/2003P00147US.

Respectfully submitted,

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/PFS/

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